

Amendments to the Claims

1. (Currently amended) A method comprising:

granting radio network access to a first wireless device operating under a given mobile identification number (MIN) and a given electronic serial number (ESN), and then engaging in a first over-the-air activation process to establish a first subscriber account for the first wireless device and to program the first wireless device with a first new MIN; and

granting radio network access to a second wireless device operating under the same given MIN and the same given ESN, and then engaging in a second over-the-air phone activation process to establish a second subscriber account for the second wireless device and to program the second wireless device with a second new MIN different than the first new MIN,

wherein granting radio network access to the first wireless device operating under the given MIN and the given ESN comprises receiving a first registration request from the first wireless device and responsively sending a first authentication request carrying the given MIN and given ESN to an authentication entity, and receiving from the authentication entity, in response to the first authentication request, a first authentication response,

wherein granting radio network access to the second wireless device operating under the given MIN and the given ESN comprises receiving a second registration request from the second wireless device and responsively sending a second authentication request carrying the given MIN and given ESN to the authentication entity, and receiving from the authentication entity, in response to the second authentication request, a second authentication response,

wherein the authentication entity comprises at least one of a home location register (HLR) and an authentication center (AC),

wherein the authentication entity allows multiple wireless devices to operate concurrently under the given MIN and given ESN, and

wherein the authentication entity also receives and responds to authentication requests for previously-activated wireless devices.

2. (Original) The method of claim 1, further comprising:
granting radio network access to the first wireless device operating under the first new MIN; and

granting radio network access to the second wireless device operating under the second new MIN.

3. (Cancelled)

4. (Original) The method of claim 1, further comprising:
maintaining in a switch a set of logic that blocks a given wireless device from originating voice calls if the wireless device is operating under the given MIN and the given ESN but that allows the given wireless device to originate a packet data session if the given wireless device is operating under the given MIN and the given ESN.

5. (Original) The method of claim 1, further comprising:

after granting radio network access to the first wireless device, allowing the first wireless device to enter into a first packet-data session with a provisioning server, wherein engaging in the first over-the-air activation process comprises the provisioning server engaging in the first over-the-air activation process with the first wireless device; and

after granting radio network access to the second wireless device, allowing the second wireless device to enter into a second packet-data session with the provisioning server, wherein engaging in the second over-the-air activation process comprises the provisioning server engaging in the second over-the-air activation process with the second wireless device.

6. (Original) The method of claim 1,

wherein engaging in the first over-the-air activation process comprises (i) exchanging web communications between the provisioning server and the first wireless device to collect user data for the first subscriber account, and (ii) sending the first MIN from the provisioning server to the first wireless device for the first wireless device to record in data storage for later use; and

wherein engaging in the second over-the-air activation process comprises (i) exchanging web communications between the provisioning server and the second wireless device to collect user data for the second subscriber account, and (ii) sending the second MIN from the provisioning server to the second wireless device for the first wireless device to record in data storage for later use.

7. (Original) The method of claim 1,

wherein the first wireless device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer; and

wherein the second wireless device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

8. (Currently amended) A method comprising:

distributing a plurality of wireless devices to users, wherein each wireless device of the plurality of wireless devices includes stored pre-activation provisioning data and stored post-activation provisioning data, wherein the stored pre-activation provisioning data on all of the wireless devices includes (i) common authentication data that is the same on all of the wireless devices, the common authentication data comprising a common mobile identification number (MIN) and a common electronic serial number (ESN) and (ii) unique authentication data that is different per wireless device;

receiving into a network from a first of the wireless devices a first registration request that carries the common authentication data, and granting radio frequency (RF) connectivity to the first wireless device in response to at least the common authentication data carried in the first registration request; and

receiving into the network from a second of the wireless devices a second registration request that carries the common authentication data, and granting RF connectivity to the second wireless device in response to at least the common authentication data carried in the second registration request,

wherein granting radio network access to the first wireless device comprises receiving a first registration request from the first wireless device and responsively sending a first authentication request carrying the given MIN and given ESN to an authentication entity, and receiving from the authentication entity, in response to the first authentication request, a first authentication response,

wherein granting radio network access to the second wireless device operating under the given MIN and the given ESN comprises receiving a second registration request from the second wireless device and responsively sending a second authentication request carrying the given MIN and given ESN to the authentication entity, and receiving from the authentication entity, in response to the second authentication request, a second authentication response,

wherein the authentication entity comprises at least one of a home location register (HLR) and an authentication center (AC),

wherein the authentication entity allows multiple wireless devices to operate concurrently under the given MIN and given ESN, and

wherein the authentication entity also receives and responds to authentication requests for previously-activated wireless devices.

9. (Original) The method of claim 8, further comprising:

receiving into the network from the first wireless device a first mobile-IP registration request carrying the unique pre-activation provisioning data of the first wireless device, and granting packet-data connectivity to the first wireless device in response to at least the unique pre-activation provisioning data of the first wireless device;

receiving into the network from the second wireless device a second mobile-IP registration request carrying the unique pre-activation provisioning data of the second wireless device, and granting packet-data connectivity to the second wireless device in response to at least the unique pre-activation provisioning data of the second wireless device;

receiving into the network from the first wireless device a first packet-data communication, and sending the first packet-data communication to a provisioning server to trigger a provisioning session between the provisioning server and the first wireless device, in which the provisioning server collects billing information from the first wireless device and sends further post-activation provisioning data to the first wireless device; and

receiving into the network from the second wireless device a second packet-data communication, and sending the second packet-data communication to a provisioning server to trigger a provisioning session between the provisioning server and the second wireless device, in which the provisioning server collects billing information from the second wireless device and sends further post-activation provisioning data to the second wireless device.

10. (Currently amended) The method of claim 8,

~~wherein the common pre-activation provisioning data includes (i) a common mobile identification number and (ii) a common electronic serial number;~~

wherein the unique pre-activation provisioning data includes a unique username; and

wherein the stored post-activation provisioning data on each device includes an electronic serial number that is different per wireless device.

11. (Original) The method of claim 10, wherein the pre-activation provisioning data further includes a common authentication-key (A-key).

12. (Original) The method of claim 8, wherein each of the first and second wireless devices is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

13. (Original) The method of claim 8, wherein distributing the plurality of wireless devices comprises selling the plurality of wireless devices.

14. (Currently amended) A wireless device comprising:

a processor;

data storage;

a wireless communication interface; and

a user interface,

wherein the data storage contains pre-activation provisioning data and initial post-activation provisioning data, wherein the pre-activation provisioning data comprises a mobile identification number ~~[[/]]~~ and electronic serial number (~~MIN/ESN~~ MIN-ESN) pair that is the same as a ~~MIN/ESN~~ MIN-ESN pair stored as pre-activation provisioning data on at least one other wireless device, and wherein the initial post-activation provisioning data comprises an ESN that is unique to the wireless device,

wherein the data storage further contains application logic executable by the processor to use the pre-activation MIN-ESN pair as a basis to request radio frequency (RF) connectivity from a wireless carrier, and

wherein, by using the MIN-ESN pair to gain RF connectivity, the wireless device is authenticatable by a network authentication entity that also authenticates previously-activated wireless devices based on MIN and ESN.

15. (Currently amended) The wireless device of claim 14, wherein the ~~data storage further comprises~~ application logic is further executable by the processor (i) ~~to use the pre-activation MIN/ESN pair as a basis to request radio frequency (RF) connectivity from a wireless carrier,~~ (ii) to engage in a data session with a provisioning server, ~~[[iii]]~~ (ii) to send billing information to the provisioning server, and ~~[[iv]]~~ (iii) to receive and store further post-activation provisioning data from the provisioning server,

wherein the further post-activation provisioning data comprises a post-activation MIN unique to the wireless device,

whereby the post-activation ESN and post-activation MIN are usable in combination by the wireless device to thereafter gain RF connectivity.

16. (Original) The wireless device of claim 14, wherein the device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

17. (Currently amended) The wireless device of claim 14, wherein the initial post-activation provisioning data is stored in a Number Assignment Module (NAM) block of the data storage, and wherein the application logic is executable to determine that the NAM block does not contain a MIN and to responsively use the pre-activation ~~MIN/ESN~~ pair as a basis to request RF connectivity.

18. (Currently amended) A method comprising:
storing concurrently in a wireless device both pre-activation provisioning data and post-activation provisioning data, wherein the pre-activation provisioning data comprises a common mobile identification number ~~[[/]]~~ and electronic serial number (~~MIN/ESN~~ MIN-ESN) pair that is the same as a ~~MIN/ESN~~ MIN-ESN pair stored as pre-activation provisioning data on at least one other wireless device, and wherein the post-activation provisioning data comprises an ESN that is unique to the wireless device;

sending from the wireless device into a network a registration request carrying the common ~~MIN/ESN~~ MIN-ESN pair, so as to acquire radio frequency (RF) connectivity,

wherein, by using the MIN-ESN pair to gain RF connectivity, the wireless device is authenticatable by a network authentication entity that also authenticates previously-activated wireless devices based on MIN and ESN.

19. (Original) The method of claim 18, further comprising, after acquiring RF connectivity:

sending from the wireless device into the network a data communication, and then receiving into the wireless device a request for billing information to set up a service account for the wireless device;

sending the requested billing information from the wireless device into the network; and receiving from the network a post-activation MIN tied to the service account, and storing the post-activation MIN in the wireless device.

20. (Original) The method of claim 19, further comprising, after storing the post-activation MIN:

using the post-activation MIN and post-activation ESN as a basis to gain RF connectivity.

21. (Currently amended) A cellular telephone activation system comprising:
a radio network access system arranged to grant radio network access concurrently to multiple cellular telephones operating under a common mobile identification number ~~[(MIN) /]~~ and electronic serial number (MIN-ESN) pair; and

an over the air activation system arranged to engage in web communication with a cellular telephone operating under the common ~~MIN/ESN~~ MIN-ESN pair and to program the cellular telephone with a new MIN₂

wherein the radio network access system grants radio network access to each cellular telephone at least in part by receiving from the cellular telephone a registration request carrying the common MIN-ESN pair, responsively conveying an authentication request carrying the

common MIN-ESN pair to an authentication entity, and receiving from the authentication entity,
in response to the authentication request, an authentication response,

wherein the authentication entity comprises at least one of a home location register (HLR)
and an authentication center (AC),

wherein the authentication entity allows multiple wireless devices to operate concurrently
under the common MIN-ESN pair, and

wherein the authentication entity also receives and responds to authentication requests for
previously-activated wireless devices.